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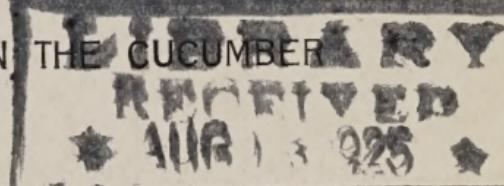
THE CHAYOTE

A PERENNIAL ORNAMENTAL VINE

A PROLIFIC PRODUCER OF DELICATE-FLAVORED
FRUIT WITH A REMARKABLE TEXTURE.

FITTING IT TO MANY MORE USES.

THAN THE CUCUMBER



PORTION OF A FRUITING CHAYOTE VINE

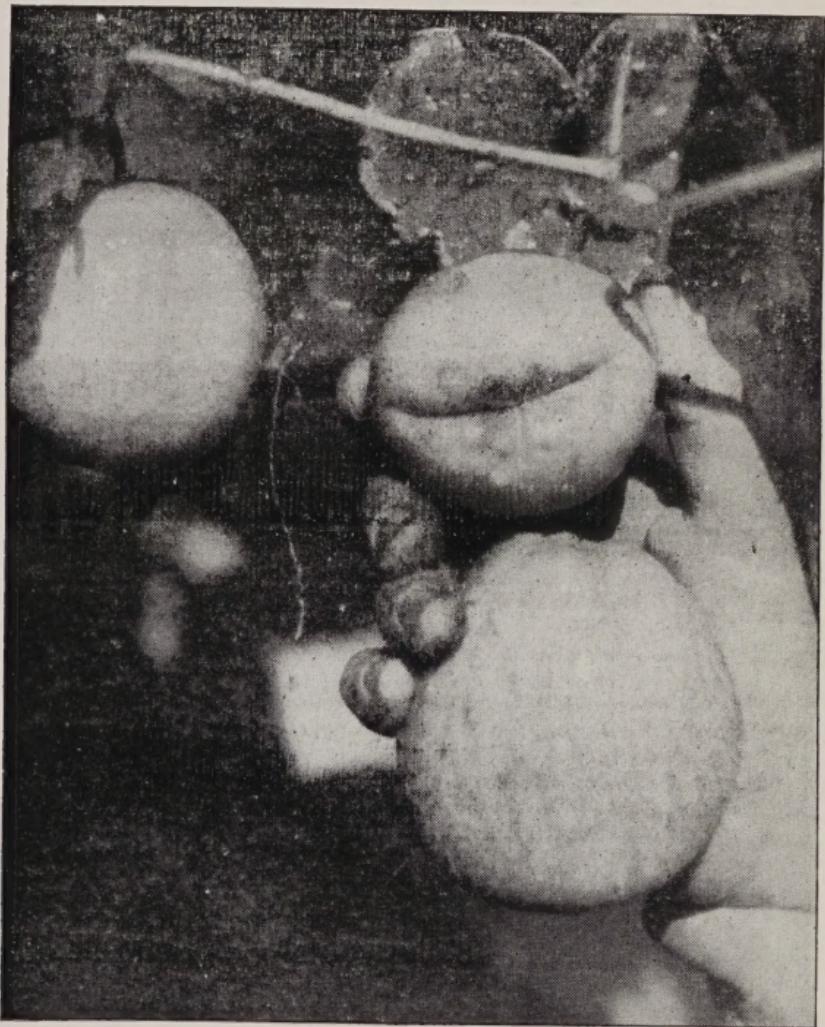
THE CHAYOTE

THE CHAYOTE (pronounced chi-o'-ty), a vigorous, climbing, perennial plant of the cucumber family, is native to Mexico and Central America, but it is now cultivated as a garden vegetable in warm regions in many other parts of the world. It has become one of the principal vegetables of the Island of Madeira; it is grown in Algeria and shipped to Paris; it has been introduced successfully into Ceylon and become popular there; and in southern Japan it is being popularized as a recent introduction. Realizing the value of the chayote for southern horticulture, the United States Department of Agriculture, through the Office of Foreign Seed and Plant Introduction, during the last few years has introduced a number of promising varieties of chayotes from various regions where the vegetable is under successful cultivation. Through work carried on at the United States Plant Introduction Gardens, and by special cooperators in those states where the chayote fruits successfully, the Department is conducting experiments to determine the desirable types best adapted to this country.

There are many varieties of chayotes, the fruits of which vary in size, in color, in texture, and in character of surface. The size of the fruits in the different varieties ranges from a few ounces to two pounds or more each in weight; the color, from dark green to ivory white; the texture, from fiber-free to somewhat fibrous and with a tough fibrous seed coat; the surface from quite smooth to deeply wrinkled or corrugated and from spineless to very spiny. If smooth, spineless, seed chayotes can be secured, the more corrugated and spiny types should not be planted, since the latter are less attractive and are less easily prepared for cooking.

In this country, the chayote is valued principally for its fruits, but the plant also forms starchy underground tubers which are esteemed a delicacy in Mexico and Guatemala, where the tubers are harvested after the vines are two years old. But since the vines are sometimes injured seriously and even may be destroyed in digging the tubers, it is not advisable, if one wishes fruits, to remove the tubers. The young growing tips of the vines are used in certain regions as we use spinach; and in some European cities the beautiful, silver-white straw obtained from vines grown in the Island of Reunion is employed in the manufacture of expensive hats, baskets, and other articles.

The fruit has a mild, but agreeable flavor, and in the best varieties, an excellent fiber-free texture. It has a single, large, flat seed which is without a hard seed coat, and, unless desired for use alone as a table delicacy, the seed is not removed, but is cooked with the rest of the vegetable. Chemical analysis shows the chayote to contain from 5 to 8 per cent of carbohydrates and from 1 to 2 per cent of protein. The fruits may be eaten when immature, but the quality improves as they approach maturity. This stage is reached in from twenty to thirty days from time of blossoming, and is indicated by



THE *PERULERO*—A PERFECTLY SMOOTH SPINELESS CHAYOTE RECENTLY INTRODUCED FROM GUATEMALA

the general appearance of the fruits and by their firmness of flesh; mature fruits do not yield to pressure from the thumb as do immature ones. Fruits intended for market should be permitted to remain on the vines until about mature.

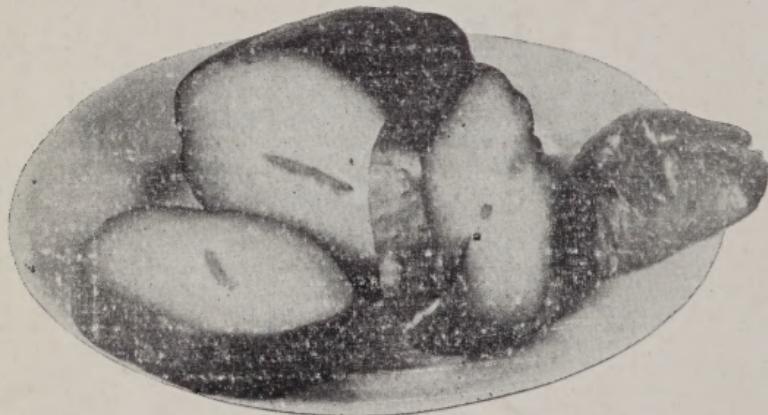
The chayote seed seem to have no dormant period. Consequently, when the fruits become mature in warm, moist regions, the seed begins to protrude at the large end of the fruit and a sprout quickly forms even before the chayote is picked. This sprouting continues

if the fruits are kept in a warm place after they are picked. Sprouting does not materially affect the quality of the fruits, except that it causes a gradual shriveling of the flesh. To prevent this shriveling due to sprouting, the end of the protruding seed should be pinched off. Further shriveling may be prevented by wrapping the fruits singly in paper, packing them in excelsior, and storing them in a cool place (50° to 60° F.). The Guatemalan Indians pinch off the ends of the seeds and bury the chayotes in the ground, where they are said to keep in excellent condition for several weeks.

In preparing chayotes for the table one either may boil them—entire or cut into slices—and peel them afterward (when the skin of most varieties will be found to strip off very easily), or he may slice and pare before cooking them. There are many methods of preparing chayotes for the table, but the following are especially recommended.

RECIPES.

CREAMED CHAYOTES.—The chayote, previously boiled in salted water, and diced, sliced, or segmented as desired, is excellent when served with a cream, butter, or tomato sauce.



CHAYOTE SLICED CROSSWISE PREPARATORY TO PARING

FRIED CHAYOTES.—Cut the chayotes, preferably crosswise, into slices nearly a half inch in thickness, pare, dip into bread or cracker crumbs or a beaten egg, and fry slowly in a covered fry pan until tender. Sprinkle with salt and a little sugar if desired. Serve hot. Previously boiled chayotes are excellent when fried as above.

STUFFED CHAYOTE.—Cut chayotes in half lengthwise; boil until soft, and remove the pulp and seed without breaking the skin; mash the pulp and mix thoroughly with a little butter; salt and pepper to taste. Mince a small piece of cooked beef or other cold meat together with the boiled chayote seeds and a little onion and parsley, and fry until brown; add this to the chayote pulp, replace the mixture in the skins, smooth over the tops with butter, and bake until well browned.

CHAYOTE BAKED WITH CHEESE.—Place sliced chayotes in a saucepan with a piece of salt pork and cook until tender in just enough water to cook them. Season with paprika and salt. When

tender, remove slices with a skimmer and place in baking dish. Prepare a white sauce, using the water in which the chayotes were



A NATIVE GUATEMALAN CHAYOTE VINE. NOTE THE REMARKABLE VINE GROWTH
cooked, and some milk, and pour over the chayotes. Cover with
grated cheese and bread crumbs, add bits of butter, and bake to a
golden brown.

CHAYOTE SALADS.—Because of its delicate texture and mild flavor the chayote is especially desirable for use in salads.

Prepare as for creamed chayotes, cool, and serve on lettuce leaves with mayonaise or French dressing. Or, the boiled and diced chayotes may be served in a mixed salad with tomatoes, celery, or other vegetables.

CHAYOTE PICKLES.—Young chayotes make excellent pickles, either sweet, sour, or dilled. Any standard recipe for preparing cucumber pickles will be found satisfactory in preparing chayote pickles, with the exception that chayotes are usually cooked for a few minutes before being pickled.

OTHER USES FOR THE CHAYOTE.—Chayotes boiled and mashed with cloves and lemon juice, somewhat resemble apple sauce, they may also be used with any fruit juice as a base for tarts. Chayotes cut into pieces are often boiled with meats, or, they may be boiled and served with other vegetables. If boiled and served alone, the addition of a little sugar in boiling is sometimes desirable.

CULTURAL DIRECTIONS.

The chayote can be grown as an annual much farther north than as a perennial since the roots even are easily killed by freezing. It has been grown and fruited as far north as Washington and as many as 50 fruits were produced on a single vine in an unusual fall when the first autumn frost was delayed until the 11th of November. As a perennial, however, it has not succeeded farther north than Charleston, S. C. On the Pacific Coast its cultivation seems to be confined to the southern coastal portions. In general it might be said that it is adapted for culture in those regions where the ground does not freeze more than a few inches.

SOIL.—Chayotes grow best in a rich, well-drained sandy loam, but will do well in any good garden soil and in well-drained muck soils.

PREPARATION.—The ground should be dug or plowed deep and especially well worked where the chayotes are to be planted. If the land drains poorly and underdrainage is not practicable, satisfactory results may be obtained by plowing the soil into wide ridges and planting the seed on these ridges.

PLANTING.—Chayotes are usually planted in the spring as soon as danger from frost is past. In southern Florida it is possible to plant in the fall and by protecting the young plants with a heavy mulch during frosty or freezing weather to carry them through the winter successfully. Plant the entire fruits, one in a hill, about 12 feet apart each way. When planting, place the fruit on its side with the broad end slanting slightly downward; cover this broad end with not more than two inches of soil, and leave the smaller or stem end exposed.

CULTIVATION.—Deep cultivation may be practiced at first, but as soon as the plants get well under way they begin to form roots near the surface. In order not to disturb or cut these surface roots, shallow cultivation or mulching should now be practiced. Cultivation should be sufficiently frequent to keep down weeds and maintain the ground in good tilth. When the plants are watered artificially, as is necessary in periods of drought, a basin or depression should be formed about them to receive the water. To prevent the too rapid evaporation of

the water and the baking of the soil, either fresh soil should be drawn about the plants after each watering, or a thick mulch should be maintained about them and the plants watered through this mulch.

SUPPORTS.—The chayote is a rampant grower and requires some sort of support. A fence, a tree (if not furnishing too dense a shade), or an out building may provide a fairly satisfactory support. If it is intended to grow chayotes commercially, however, large T trellises, furnishing plenty of space for the vines to run on, are necessary.

FERTILIZERS.—Chayotes are vigorous growers and gross feeders. They should be supplied in the spring with an abundance of plant food. Well-rotted stable manure—about a wheelbarrow load to each plant—has been found to give satisfactory results. In poor soils the manure should be supplemented by a standard commercial fertilizer with a relatively high potash content. Apply two or three handfuls to each plant and work well into the soil.

Vine growth may be stimulated by working about 5 ounces of nitrate of soda into the soil around each plant, or by watering with a solution made by dissolving the 5 ounces of sodium nitrate in 4 gallons of water. (Neither the dry nitrate nor the solution should come in direct contact with the foliage of the plant.) Hardwood ashes supply potash and lime, which together fertilize the soil and tend to keep it sweet. A few handfuls applied to each hill and worked well into the soil, either before planting or after the plants are established, will prove beneficial.

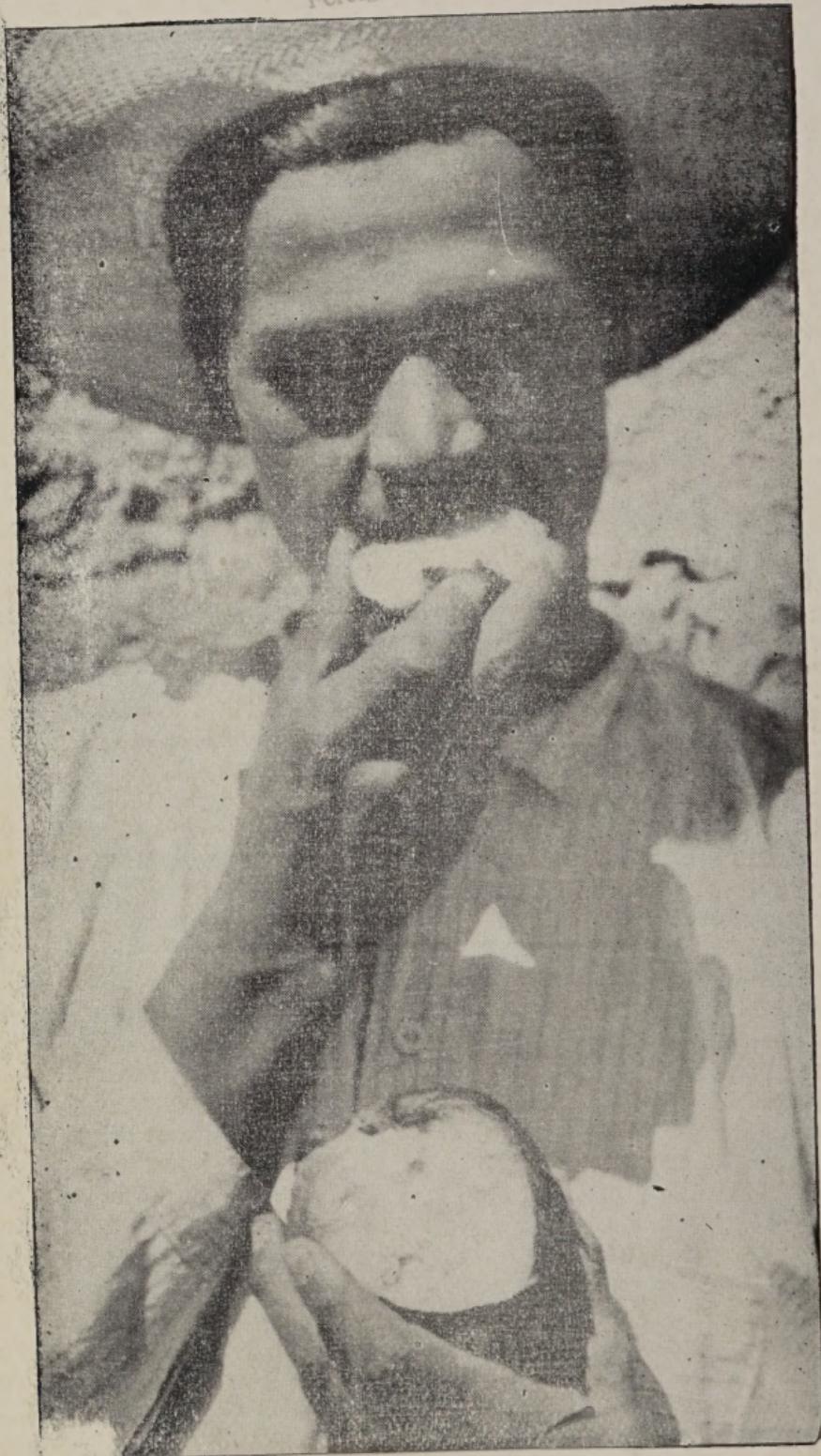
These fertilizers should be applied in the spring, but later applications should be made as they seem necessary to keep the plants in a vigorous condition of growth and to stimulate fruit production.

FRUITING.—The chayote is a perennial and if care is taken to protect the roots from freezing by providing a good thick mulch of straw, dried grass, or similar material, the vines will come up from the old roots in the spring, and under favorable conditions will produce a spring crop. The main part of the crop, however, is produced in the cool weather of the fall, from late in September until the plants are cut down by frost.

SEED STORAGE.—If intended for seed, chayotes should be permitted to remain on the vines until mature, but not until sprouts form. They should be handled carefully in picking, wrapped separately in paper, packed in a box or crate with excelsior between the layers, and stored in a temperature that does not fall below 45° F. or rise above 68° F. The optimum storage temperature for chayotes is about 55° F.

DISEASES AND INSECT PESTS.—Chayotes are sometimes attacked by fungous diseases. No satisfactory control measure is known aside from supplying the proper soil, moisture, and cultural requirements. Bordeaux mixture has been used with apparent success in checking these fungous diseases, but it is not recommended as an absolute control measure. The melon and pickle worms, which attack the fruits, may be held in check by spraying with arsenate of lead. Plant-lice may be controlled by spraying with a nicotine preparation. Chayotes are also subject to root-knot, but they seem to withstand this disease for one or two years as well as any other truck crop commonly grown in the South which is susceptible to this pest.

U. S. Department of Agriculture
Office of
Foreign Seed and Plant Introduction



GUATEMALAN EATING A BOILED CHAYOTE